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# Bureau of Land Management

## Strategic Plan

## Implementation Considerations

Preliminary Draft

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# STRATEGIC PLAN IMPLEMENTATION CONSIDERATIONS

The conceptual system recommended in the Strategic Plan has been developed using guidelines that, when implemented, will result in a minimal impact on the current BLM organization and procedures. However, it is impossible to integrate a major data processing system into Bureau operations without some significant changes being required. This document will discuss several areas, peripheral to the system itself, which must be carefully planned in advance in order to realize a successful system implementation.

## 1. ORGANIZATION

The adoption of the system proposals alone are not enough to assure their ultimate success. The Bureau should strongly consider appropriate organizational changes to further strengthen the prospects for the successful implementation and continuity of the recommended system. Experience has shown that all too often costly systems have fallen by the wayside because of the absence of executive commitment and direction. Acceptance of the following suggestions would provide the level of management attention required. The current organizational structure utilized by BLM to accomplish their mission will not be impacted by these suggestions. They pertain to establishing effective control over the information collection and processing functions only.

The Bureau is asked to consider organizational aspects of system implementation in two phases. Phase I pertains to the establishment of the Management Information Systems Office for purposes of promoting the initial steps for implementing the system. Phase II continues the Management Information Systms Office but urges modifications to the Phase I structure to meet management circumstances in the more distant future.

## 1.1 PHASE I ORGANIZATIONAL PROPOSALS

Phase I organizational proposals can be effected with minimum personnel and organizational turbulence and dislocation. The proposals, if adopted, will take place during the critical starting period of system implementation. Phase I organization proposals shown in Figure 1 are discussed in the following subsections.

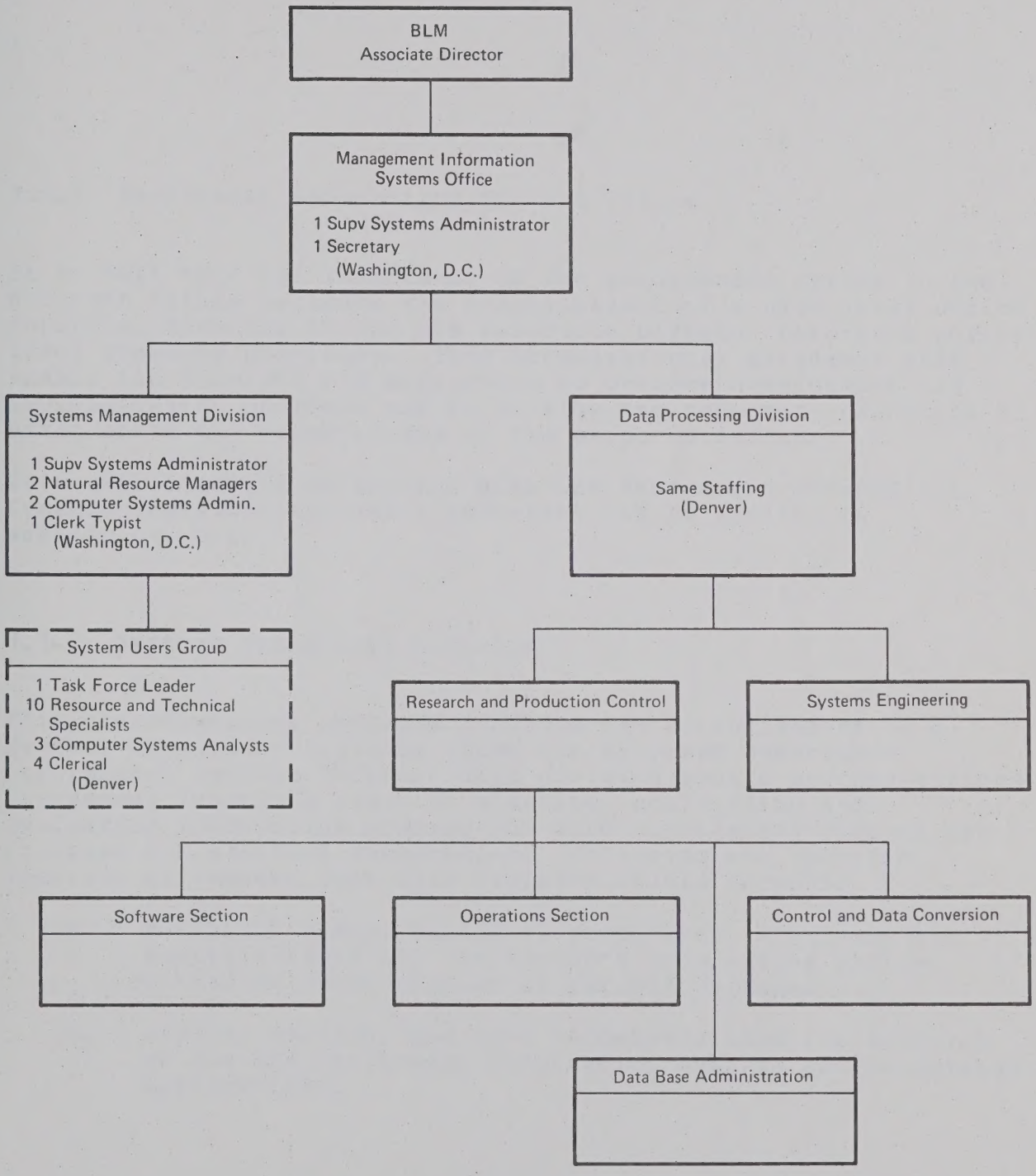


Figure 1. Phase I Organization Structure

### 1.1.1 Management Information Systems Office

It is felt that the importance of the recommended system to the Bureau's future warrants the establishment of a high level office reporting directly to the BLM Associate Director through a policy level steering committee. This organizational alignment will enable the Bureau's top management to oversee development and implementation progress and to provide the necessary direction to bring about the expectations of the proposed system.

This office should be staffed with one Management Information Systems Administrator and a secretary and be located in Washington, D.C.

### 1.1.2 Systems Management Division

This organizational proposal includes the establishment of a Systems Management Division under the proposed Management Information Systems Office. This division should perform various management functions aimed at planning, controlling and evaluating information systems and also considering current ADP programs for eventual integration. Following are specific function statements that this division should perform:

a. Establish plans, policies, procedures, standards and specifications for the Bureau's information system including incorporation of current systems.

b. Review, analyze, and make recommendations for approval of new and continuing information systems and associated applications.

c. Direct and monitor the development, documentation and design of approved proposals for new or revised data and information systems.

d. Maintain currency in all aspects of state-of-the-art automated data processing technology.

e. Maintain currency with developments in remote sensing and scientific computer applications and establish plans for interfacing them into the system.

f. Establish short and long range goals, and control, monitor and report progress of system implementation.

g. Develop requests for proposals and act as COAR for the Bureau.

h. Recommend hardware acquisition, modification, and disposals.

i. Develop training needs, establish schedules, and identify personnel to be trained in operational and managerial aspects of the system.

j. Identify and request assignment of specialists to serve on the System Users Group.

k. Assume responsibility for the continuing maintenance of the Strategic Plan document.

The staffing for this division should include two teams plus a supervisor and a clerk typist.

Each team should have one Natural Resource Manager to assure that developed systems are the product of the contributed knowledge of technical specialists. This is in accordance with the Strategic Plan Study team's belief that the users should have early and continuing influence on the design of systems whch are earmarked for their eventual use. The Natural Resource Managers should have at least 10 years of Bureau experience.

The second member on each team should be a Computer Systems Administrator to work closely with and provide technical expertise to complement the operational experience of the Natural Resource Manager.

It is initially conceived that one of the teams should devote its time to functions involving system implementation and the other team should devote its time to functions related to planning and establishing procedures. When these functions have been initiated and progressed sufficiently to be set aside, the other managerial functions can be started. Other functions include control and evaluation of development and implementation progress.

The chief of the Systems Management Division should be a Computer Systems Administrator.

The Systems Management Division should be co-located with the Management Information Systems Office in Washington, D.C.

### 1.1.3 Data Processing Division

The Phase I organizational proposal incorporates the existing Data Processing Division into the proposal Management Information Systems Office. The basis of this proposal is to give the Bureau an organizational design which places management information activities under a single manager. The single manager approach will be conducive to integration of information systems and reduce fragmentation and duplication of effort.

The functions of the Data Processing Division would remain essentially the same under this proposal with the exception of the transfer of ADP high level management functions to the proposed Systems Management Division and addition of data base administration and network control responsibilities. The functions that remain are as follows:

a. Provide software systems design, programming services, and associated documentation.

b. Perform systems, data base, and programming control and maintenance.

c. Monitor and control data inputs and outputs for conformance to approved programs.

d. Provide ADP support services, including data conversion, output distribution, and operation of equipment

e. Monitor and control production and equipment utilization

The Data Processing Division should remain in Denver.

### 1.1.4 Data Base Administration Group

The formation of a Data Base Administration Group recognizes the importance of data as a resource which must be controlled. Just as capital equipment, manpower, money, etc., must undergo reviews, approvals and evaluation, and must be assigned to responsible individuals, so must data. The important, and often overlooked, aspect is the critical need to concentrate and centralize this data control. The data base group meets this need, and, once formed, becomes the focal point for performing the following specific data control functions:

a. Determine data base structure/restructure requirements and implement same.

b. Catalog the responsible office/individual for each data base element.

c. Approve the use of data elements at the application level

d. Perform any and all necessary backup and recovery of the data base to insure against data loss.

e. Assign passwords to authorize data use by an individual

f. Develop statistical algorithms for determining data completeness and quality.

g. Maintain data usage statistics

This group would be in the Data Processing Division in Denver.

### 1.1.5 System Users Group

The successful development and implementation of the BLM information system will require the establishment of a users group made up of BLM technical and administrative personnel. The users group should include specialists in forestry, range, minerals, water, wildlife, recreation, geology, lands, economics, public relations, finance, personnel, and other significant areas of BLM responsibility. The group should represent all facets of BLM activity and should contain representation from all levels; Washington, D.C., Denver Service Center, Boise Fire Center, state, district, and resource area personnel. The primary responsibility of the group will be to assure that the system adequately supports the Bureau's information needs in a manner that is convenient for designated personnel to use. In addition, the group shall be responsible for assuring that the system is integrated smoothly into Bureau operations in an effective and timely basis. The areas of major responsibility envisioned for this group are discussed below. As the group is formed and begins to participate in these various activities, additional areas of responsibility will likely emerge.

#### 1.1.5.1 Formation and Training

The first step will be to select user group representatives from those areas mentioned earlier. Each person selected should have an in-depth working knowledge of his area of responsiblity and extensive experience in Bureau operations.

Concurrent with the selection of user group personnel, a course of instruction should be prepared that covers the concepts and terminology of ADP hardware, software, the system development process, proposed ADP application packages, and high altitude color infrared and multispectral photography applications.

It is estimated that such a course could be conducted in approximately 90-120 classroom hours.

4.1.5.2 System Design Support Activities.

Once the users group has completed the course of instruction, they should become actively involved in detailed system design activities. They should begin working with ADP system design personnel to establish exact data content within the system, determine the user interface requirements to the system both for data input and for information display and output. The eventual utility of the system will be heavily dependent on the success the users group achieves in insuring that the design includes input and output considerations that will place the least burden on BLM field personnel.

The detailed design of any system requires the development of rigid procedures regarding the input and storage of data. For the system to be successful, very little or no duplication should exist regarding stored data. In other words, a single set of data elements should exist, e.g., plant species, percent of cover, etc., within the system for any specific geographic area sample. This will require that range, forestry, wild life, etc. personnel agree on precisely what each discipline requires in each data category then establish a single storage record format that satisfies all disciplines.

The data input formats and methods for the various disciplines may vary depending upon the specific data availability for each. This must be worked out jointly between personnel within the various disciplines and with system design personnel.

Output formats and media may also vary depending upon the information needs of the various disciplines. Again, these should be worked out between the various disciplines then with the system design personnel.

The users group will also participate in critical design reviews prior to system/program development activities. They should solicit input/comments/concurrence from as broad a spectrum of BLM expertise as is reasonable in order to assure that what is developed will actually satisfy the needs of those for whom the system is being developed.

### 1.1.5.3 System Development Support

Once concurrence is received on the detailed system design, system development activities can begin. It shall be the responsibility of the users group to answer questions regarding inputs, storage, and outputs that may arise during program development. This participation should be minimal, as most questions will have been resolved during the design phase.

User group activities that can be accomplished during program development are as follows: 1) System Users Documentation Development, 2) System Integration and Test Support, 3) Formal Training Development in Support of Implementation, and 4) Development of Computer Assisted Instruction (CAI) Packages. Each of these areas is discussed in the following subsections.

#### 1.1.5.3.1 System User Documentation Development

The development of adequate user documentation and training has more to do with satisfactory user acceptance of a system than virtually any other system development activity. Although the users group will have only secondary responsiblity in this area, they should act as the consultant for both the format and content of user documentation.

The user documentation should support those unfamiliar with the system as well as those who are experienced and need assistance to accomplish tasks that are performed only periodically. It should be developed in a modular fashion so that any equipment configuration at any office can have appropriate user documentation by simply selecting appropriate modules of the user documentation. This approach has the advantage of being maintainable from a central location. Updates for specific modules would be distributed to only those offices having need of the update. For example, plotters may only be installed at state offices, therefore, if changes or additions are made regarding plotter operation, then the Plotter Operators Guide Document Module could be updated and distributed only to the state offices

1.1.5.3.2 System Integration and Test Support

As in user documentation development, the users group should have only secondary responsiblity for system integration and test development. They should, however, be responsible for the user aspects of the actual system test exercise.

Prior to system testing, the user group should assist in the development of the system test plan to assure that all facets of the system as contained in the detailed system design are included for testing. The group will also have responsibility for preparing real and comprehensive test data to be used in the operational test activity. Once the programs, test plan, and user documentation are completed, testing can begin. The objective of any system test is to test in unison, the hardware, software, and documentation. If any problems are encountered, the offending unit of hardware, software, or documentation must be corrected and testing reiterated. The controlling document for determining where the error lies and where correction should be made is the detailed design specification. This should only be deviated from with concurrence from all concerned representatives.

1.1.5.3.3 Formal Training Development in Support of Implementation

Prior to, concurrent with, and subsequent to the installation of equipment at any BLM site, representatives of the users group and design team should present a briefing/course to all appropriate personnel in that office.

The presentation prior to equipment installation should include system concepts and terminology, as well as information regarding detailed system design. The presentation should occur durng system design and should encourage comments to the system design group concerning system operational adequacy.

The presentation concurrent with hardware installation should cover detailed equipment operation features and maintenance. Equipment operation should include all system support capabilities and system use. All operator commands, error messages and appropriate corrective actions will be explained. The training should also include discussion regarding the input of data for that office and the development of schedules for data input for that office. The intent here is to provide whatever assistance is necessary to fully implement system support capabilities for the office as rapidly as possible.

The presentations subsequent to hardware installation should occur on a rotating basis (1 year) and should take the form of a seminar. These sessions can be extremely effective for reviewing system problems, support capabilities available that are not being used, and for isolating additional support capabilities required to support field personnel. These seminars will be an important ingredient for maintaining the system as a dynamic tool for effectively supporting Bureau operations.

1.1.5.3.4 Development of Computer Assisted Instructional Packages

The Computer Assisted Instruction (CAI) feature of the system can become a vital tool for the central development of information to be dispersed to all or selected BLM sites. Instructional packages on any subject area from terminal operations to new inventory procedures can be developed at a central point then accessed from any office having the equipment to do so. This feature could become a primary factor in the rapid successful implementation of new application packages on the host computer. For example, as a new application package is being developed, a CAI package could be developed in parallel with it. Once the programs and documentation had been tested, both the new programs and the CAI package could be made available at all offices simultaneously. Personnel in all offices could begin immediate use of the application by first accessing the CAI package to understand its utility and operation. Any problems encountered could be discussed during the rotating seminars proposed in the previous section.

### 1.1.5.4 Other User Group Responsibilities

In most user group activities discussed above, the user group would have a secondary role, namely, that of assuring that the user's needs were being supported in all development activities. There are a number of areas where the users group should assume primary responsibility for their completion.

#### 1.1.5.4.1 Revision/Development of BLM Procedures

Although the system will be designed to minimize any significant changes to BLM procedures, the implementation of the system will eventually impact just about all facets of BLM operation. As each application package is developed, commensurate changes will be required in current related BLM procedures. The process of updating current BLM procedures or of developing new ones should be considered a primary responsibility by the users group.

### 1.1.5.4.2 Other Areas of User Group Involvement

Numerous other areas that require direct user group involvement exist. A partial list is included here. This list will certainly expand as implementation progresses. The users group should:

a. Suggest organizational changes that become needed in order to streamline bureau operations.

b. Recommend schedules and schedule deviations for installing hardware at various BLM offices so that system capabilities are made available where they are needed and within cost schedules.

c. Monitor facility changes so that hardware installation occurs on schedule.

### 1.1.5.4.3 Continuing System Operation and Refinement Support

After the majority of the system has been implemented and is in an operational mode, the group will then provide the vehicle for bringing suggestions for system improvement to the attention of BLM management. They will be responsible for fielding all system operation related suggestions and/or complaints, evaluating them, and making their recommendations to management.

## 1.1.6 Concept of Operation

The Office of the Chief, Management Information System Office and the Systems Management Division should be established and staffed at the earliest practicable time. They should immediately begin to establish plans, policies, procedures, standards and specifications for the recommended system.

Simultaneously, the Data Processing Division should be transferred to the new organization. In the meantime, current operations for existing ADP programs can be continued. And, as further development occurs, these ADP programs can be phased out or modified, and/or integrated into the system.

The Systems Management Division should recommend to the Director a priority ranking of Bureau programs. Upon receipt of the approved priority ranking list, the Systems Management Division should plan the formation of the System Users Group, assign functions to them, and request the assignment of technical specialists from the Service Center.

ADP orientation training for technical specialists should begin immediately upon their assignment. The Systems Management Division should coordinate and put into motion the scheduling of such training. The group can begin their work when training has been completed and the computer systems analysts have been assigned.

## 1.2 PHASE II FUTURE ORGANIZATIONAL CONSIDERATIONS

A review of the proposed functional alignments and organization structure of the Management Information System Office should take place after substantial progress has been made in the implementation of the system.

It is believed the organization proposed in Phase I will not completely provide the optimum efficiency and effectiveness to support a full-scale, Bureau-wide, integrated, management information system. The basis for recommending the transfer of the present Data Processing Division in Phase I to the proposed Management Information Systms Office was to avoid organizational and personnel dislocations which are likely to occur during the critical initial phases of implementation.

The proposed Phase II organization structure is shown in Figure 2.

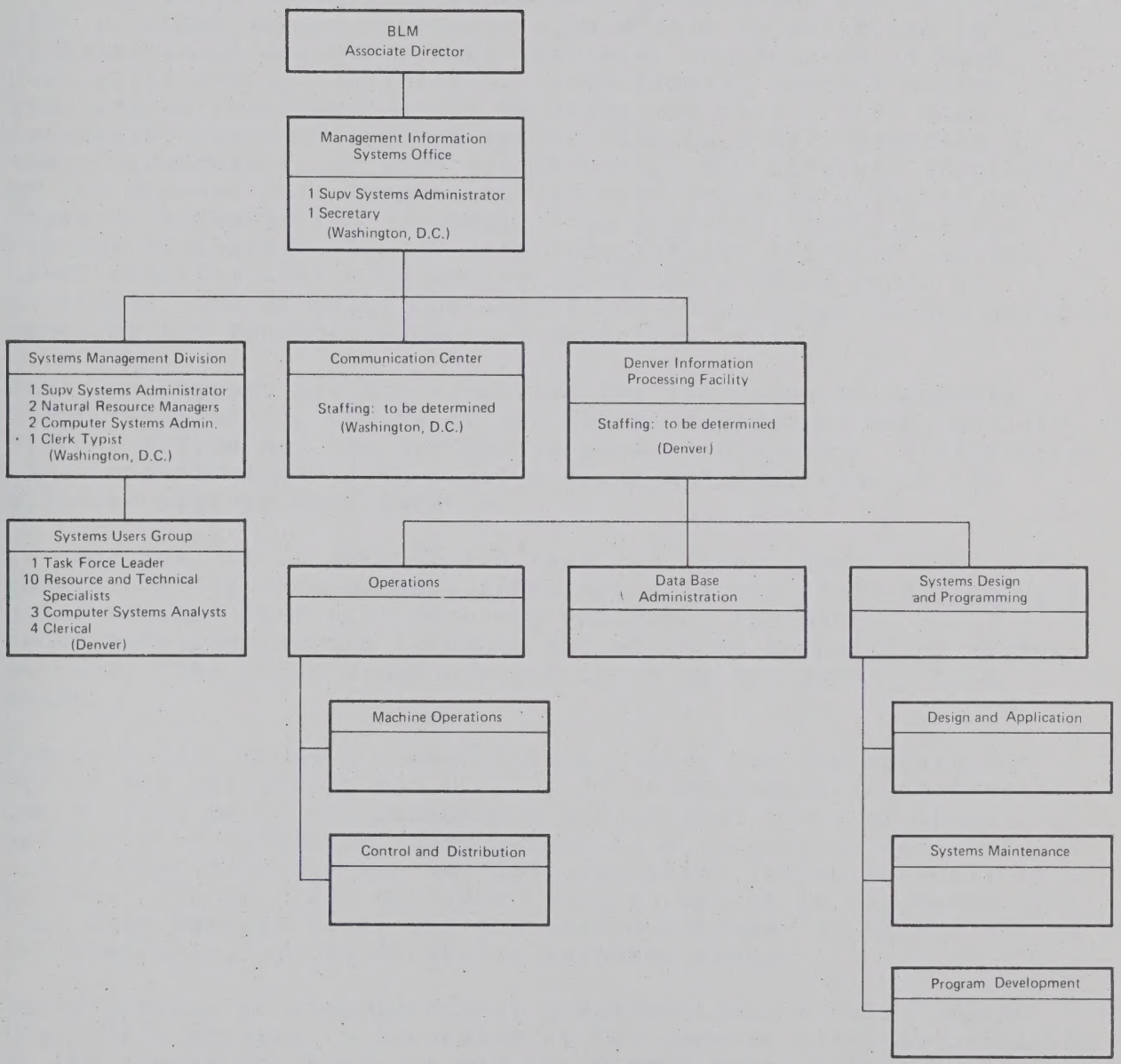


Figure 2. Phase II Organization Structure.

A Bureau-wide, integrated management information system of the type proposed in the Strategic Plan should be supported by an organizational structure that will meet the demands of high complexity and sophistication. Accordingly, systems design and programming functions should be organized with a view toward an integrated systems approach rather than to single programs or other arrangements of work assignments. The internal structure of the present Data Processing Division would be affected by the Phase II organization proposal. The proposal subdivides the Systems Engineering Branch into functionally oriented section level entities with each entity embracing a broad scope of coverage. The proposal contains minor adjustments in the present Research and Production Control Branch as well.

Staffing changes are not specified for the Phase II proposal other than for the Office of the Chief, Management Information Systems Office and the Systems Management Division. Staffing for these organizations must await a clear determination of the ultimate systems configuration.

In addition, it is anticipated that the System Users Group will continue to provide primary interface with BLM field offices and other users. They will receive, evaluate, and make recommendations on all requests for enhanced or modified system support. The group would operate in an ad hoc mode in this phase.

Figure 1 also shows a Communication Center for the Washington Office top management and staff. It is contemplated that this center will serve the management information needs of these officials by providing ready access to a variety of data and information displays via terminal operation linked directly to Denver. The specific staffing required cannot be suggested at this time because final systems configurations, which are not as yet available, should determine manpower needs.

Lastly, Phase II organizational considerations should include feasibiity studies to determine if the present computer complexes in the Alaska State Office and the Oregon State Office can be

transferred to the Management Information Systems Office, but continue to function at their present locations.

### 1.3 Remote Sensing Planning

In addition to these new organizational entities required to support the design, development, implementation and continuing operation of the information system, the Bureau has a requirement to centralize its remote sensing expertise to provide a single focal point to plan the future direction BLM should take regarding this technology.

## 2. STAFFING

In addition to the staffing requirements described in the organization section, the introduction of the proposed sysem will likely impose expanded personnel requirements in several areas.

As more of the many envisioned applications are implemented there will be several additional data entry personnel at the Denver Service Center needed to support those tasks in which data is not loaded directly from field sites. There also is the strong possiblity of a requirement for full time terminal operations personnel at field sites when the volume of data entry and retrieval reaches a level to justify this position. In the interim, existing clerical personnel, with some appropriate training, can fulfill the terminal operations requirements on a part-time basis.

With the projected increase in the number of users of the new system the production control staff will probably have to be expanded to accept, monitor, and distribute the outputs for the many additional processing jobs the proposed system is capable of handling.

In order to fully exploit the potential of the BLM investment in the new system, it is anticipated that the system will begin operation twenty-four hours daily, seven days a week as early as the development workload justifies. This necessarily will demand concommitant increases in computer operations support personnel, i.e., operators, librarians, production control clerks, etc.

A very critical new position that must be created to insure the success of the system is that of Data Base Administrator. This position should reside in the Data Processing Division in Denver. This individual and his staff (if needed) will be responsible for the integrity and efficacy of the central data base. They will review, coordinate and evaluate all proposals for additions, deletions or modifications to the data base and will possess final authority on all actions affecting the data base. They will be thoroughly trained in the concepts and features of the data management system selected by BLM and via their active participation from the initiation of the system data base they will be intimately familiar with all data base aspects as they evolve. They must be capable of designing the most efficient data structures in response to new requests, while maintaining current data base responsiveness. The data base administration function will be responsible for the establishment and maintenance of the Data Base Specification document discussed in Section 5.

The anticipated benefits to be gained by the establishment of this function are:

a. Reduction in the cost of application systems development and maintenance.

   The reduction of the dependencies between the application programs and data (data independence) provides for greater flexibility in the areas of application systems development and maintenance. Also, data non-redundancy and increased data relatability will result in improved data integrity or reliability. In order to insure that these concepts are implemented for the good of all users, there must be a person or functional group charged with the management of the data contained in the BLM data base(s). Certainly, the

concepts associated with a Data Base Management System (DBMS) will provide an environment where application systems development and maintenance can be made easier and less costly. Many of the application programmers' tasks can be performed by the DBMS. Effective utilization of the time saved will enhance application programmer productivity.

b. Increased responsiveness to the users or requestors of the data base.

The software services provided by the DBMS will permit programmers to deal with logical interfaces, thus eliminating concern for physical input/output operation. A program can be produced more quickly because the application programmer is free to concentrate primarily on the logic of the application and will give less consideration to the complex trade-offs of data management. If the interfaces which invoke these services are not standardized and controlled, the benefit will not be readily achieved. Responsiveness will also be enhanced because the data will most likely be current and in a more manageable form for handling the various types of requests for data.

c. Provide a base from which an integrated "information system", rather than traditional "data processing systems", can be constructed.

Many functions that have been application-system dependent and imbedded in the application programs can now be interpreted as Data Base Management System (DBMS) functions. Such functions as data security, data integrity, save/recovery/restart and some data validation may be provided by the DBMS. Characteristically, the multi-application environment associated with an information system requires that these functions should be controlled centrally. These controlling parameters need to be defined by the Data Base Administrator who has custody of the data base. The DBMS must insure that all processes against the data

are performed in a manner consistent with the rules or parameters governing the overall operation of the DBMS.

## 3. FACILITIES

It is difficult to predict with exactness the expansion of current ADP devoted facilities that will be incurred by implementation of the proposed system. It is evident, however, that BLM facility planners should begin considering increased space to house the central computer complex in Denver and the network equipment to be located at other sites. Additional space will also be required to house the extra personnel discussed in the previous two sections.

Wiring, air conditioning, and security requirements must also be examined in detail in coordination with the vendor(s) selected to provide the system hardware. These considerations would become part of a complete installation plan which must be developed to cover the delivery, check-out and phase-over activities connected with start-up of the new system.

## 4. PROCEDURES

As discussed in the description of the functions of the System Users Group (Section 1.1.4), any operational changes dictated by integration of the proposed system will be documented in the appropriate BLM procedures by the group. It should be the objective of future design efforts, as it was in the Strategic Plan Study, to minimize these procedural changes and to allow them only in cases where definitized benefit to BLM can be identified.

However, it should be anticipated that internal Division of Data Processing procedures and standards and those describing interfaces with the Division may have to be modified in far greater magnitude, and quite possibly entirely new procedures and

standards may have to be developed. An example of this would be a detailed procedure describing how a system user would document a shortcoming in the ADP service he is receiving.

## 5. DOCUMENTATION

In accordance with the requirement described in the previous section to establish flexible, yet consistent procedures to govern system development, implementation and use, it is recommended that a set of documents be prepared which define policy, procedures, standards and responsibilities for anyone associated with the BLM information system, including users, managers, programmers, analysts, operators, etc.

The development of the following documentation is recommended:

a. Programming Project Development Guide. This document will describe each step in the process required to take any user request from initiation through completion.

b. Documentation Standard/Guide. This document will describe the content and format for any and all documentation required to develop and maintain any program and/or system. Examples of the various documents specified will be included.

c. System Requirements Specification. This document will describe in as much detail as possible the requirements the system must satisfy in language understandable by both the intended user and the system designers.

d. System Design Specification. This document will describe the results of the conceptual system design effort. It will:

    1. Provide BLM management, users and technical personnel with insight into the impact the new system will have on Bureau operations and organization.

2. Furnish all basic technical data required for technical evaluation.

3. Provide necessary information for the planning and direction of subsequent development efforts.

e. Test Plan. This document will define the levels of testing to be performed and the objectives to be satisfied. The traditional testing levels are:

1. Development or Unit Test

2. System Test

3. Acceptance of Operational Test

The plan must provide comprehensive testing to ensure the following:

1. Absence of logic errors

2. Performance of all specified functions

3. Timely processing

4. Acceptance of a complete range of input data and input parameters

5. Proper handling of error conditions

6. Production of properly formatted outputs

7. Adherence to all interfacing conventions

8. Adherence to standards

9. Clean compilation or assembly

10. Effective documentation.

f. Data Base Specification. This document will provide detailed descriptions of all aspects of the system data

base. Data files, segments, groups and elements will be described in terms of structure, format, size, and content. All relationships will be identified.

g. Program Specification. This document will provide the programmer with the required information with which he or she can develop his program. Input and output formats, edit parameters, functions to be performed, and interfaces to be established or maintained will be described in necessary detail.

h. Program Maintenance Manual. This document will describe the logic of the operating program to the detail necessary for other programmers to quickly and thoroughly understand it, especially, if they are required to make modifications. All tables, subroutines, program linkages must be completely described.

i. Program Library and Librarian Guide. This document will describe the program library and procedures for its maintenance. It shall include procedures for maintaining a standard system library, system generation information, application program descriptions and standards, project notebooks, program conventions, etc.

j. Computer (and other hardware) Users' Guide. This document will describe the process required for job submission, run and problem resolution (machine processing priorities, late products, etc.) if required.

k. Computer Operators' Guide. This document will describe all procedures for computer operators.

l. System Glossary. This document will contain definitions of all system unique terms and system reserved codes, mnemonics, and names.

6. TRAINING

Necessarily, the proper level and type of training is the most critical factor in determining if the proposed system is to realize its objectives. Regardless of the magnitude or sophistication of an information processing system, it remains a tool to assist people in the performance of their work. Obviously, the better people understand the capabilities, operations and limitations of these tools the more effectively they can put them to use.

Prior to installing a new system it is necessary to secure as much education, classroom or correspondence, for those BLM personnel who will be directly involved with the installed system. These will include data processing managers, systems analysts, systems and application programmers and computer operators. Among the subjects that should be covered include:

a. System Architecture

b. System Features and Capabilities

c. System Control Software

    1. Operating System

    2. Data Communications

    3. Data Management

d. Programming Languages

e. System Operation.

As discussed previously, the System Users Group will work with the system design team in developing the proper educational material to be provided on-site prior to, during, and subsequent to actual implementation.

When the system has been implemented in several sites BLM can begin to take advantage of a tool called Computer Assisted Training. This involves the development of automated instructional packages, covering any appropriate subject through which BLM personnel can conduct a conversation with the package

from a system terminal. This tool can be used to familiarize personnel with a new BLM procedure, further their education in some resource management discipline or even guide them in the actual operation of the terminal which they are using.

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